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## IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF

KARL HAEBERLE, ET AL. : EXAMINER: NILAND, P. D.

SERIAL NO: 10/522,715

: GROUP ART UNIT: 1796 FILED: JANUARY 28, 2005

FOR: WATER-EMULSIFIABLE

ISOCYANATES HAVING IMPROVED

PROPERTIES

## DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS ALEXANDRIA, VIRGINIA 22313

SIR:

- I, Karl Hacberle, declare and state as follows:
- 1. I am a named co-inventor of the above-identified application. I am familiar with the claims, and have read the Office Action mailed October 10, 2007.
- 2. I have also been informed that in an interview between coursel for the Applicants and the Examiner, as reflected in the Interview Summary for the interview, that an experiment based on Example 2, described in the specification of the above-identified application, but slightly modified so that isocyanate B is hydrophilicized with the same monofunctional polyethylene of Example 1, i.e., with a molecular mass of 500 (PEO 500), instead of 1,000 (PEO 1000), would be relevant in terms of patentability.

5.03

- Accordingly, an experiment based on said Example 2, but with isocyanate B being hydrophilicized with PEO 500 used in Example 1, instead of PEO 1000, was conducted under my supervision and/or control.
- 4. In the experiment, the same amount by weight of the PEO 500 was used as the amount of PEO 1000 used in Example 2.
  - 5. The materials used are as follows:

Example IIa: Isocyanates A and B hydrophilicized

Isocyanate A:

hexamethylene diisocyanate (HDI) isocyanurate having an NCO content of 22.2% and a viscosity at 23°C of 2.8 Pas

Isocyanate B:

isophorone diisocyanate (IPDI) isocyanurate having an NCO content of 17.2% (Vestanat® T 1890/100 from Degussa)

6. The experiment was carried out as follows:

60 g (0.246 eq NCO) of isocyanate B were added to 6.7 g (0.013 mol) of a PEO 500, prepared starting from methanol, and the components were stirred at 130°C for 80 minutes.

The mixture was then cooled to room temperature.

The product is a solid polyisocyanate (b1) having an NCO content of 14.9%.

The mixtures were prepared as described at page 18, lines 30-33 of the above-identified application. Hardness was evaluated as described at page 16, lines 32-36 of the above-identified application.

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## 7. The results were as follows:

Ex. # 2a	al	bi _	NCO content
1	95	5	16.7
2	85	15	16.5
3	75	25	16.3
4	70	30	16.2

## The increase in hardness is as follows:

T (°C)	2a 1	2a 2	2a 3	2a 4
60	23	28	30	41
70	36	58	53	63
80	55	69	68	77
90	63	77	74	96
100	67	88	86	107
110	70	92	95	108
120	71	97	101	112

- 8. The resulting hardness is nearly identical with Example 2 of the above-identified application.
- 9. The above-described experiment employed the same weight amount of PEO 500 as PEO 1,000 in Example 2. If Example 2 were repeated with the same amount by weight of polyethylene oxide as in Example 1, namely 14% by weight, in my opinion, this high amount of polyethylene oxide would result in decreasing the hardness of the coating.
- 10. The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

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11. Further declarant saith not.

Customer Number

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Signature

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Date